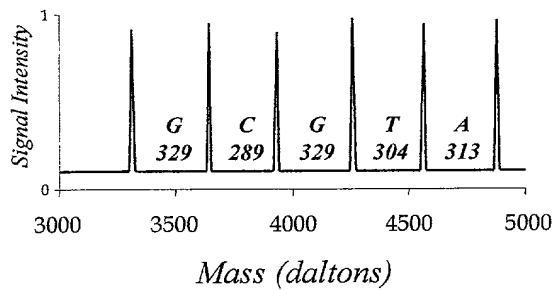


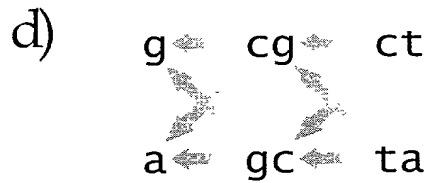
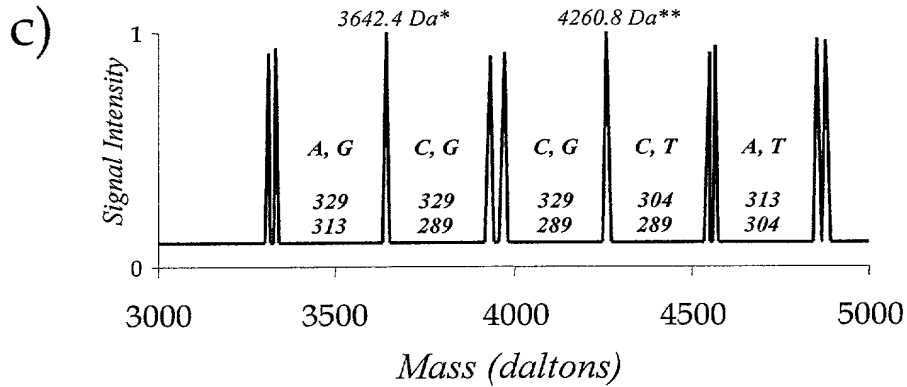
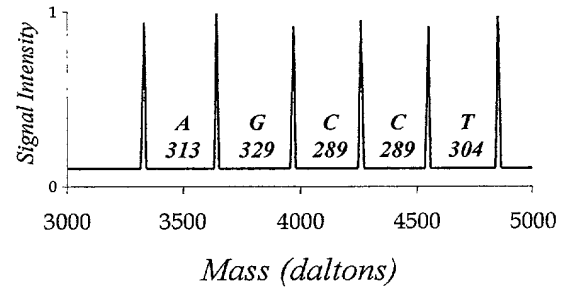
a) Sequence #1: AGCGTA

Primer	Extension	Mass (Da)
3016 Da	Products	
—	agcgt	4878.2
—	agcgt	4565.0
—	agcg	4260.8**
—	agc	3931.6
—	ag	3642.4*
—	a	3313.2



b) Sequence #2: GATCCT

Primer	Extension	Mass (Da)
3016 Da	Products	
—	gagcct	4854.2
—	gagcc	4550.0
—	gagc	4260.8**
—	gag	3971.6
—	ga	3642.4*
—	g	3329.2



e)

```

gcgct
GCGTA
ggcct
ggcta
acgct
acgta
AGCCT
agcta
  
```

Figure 1

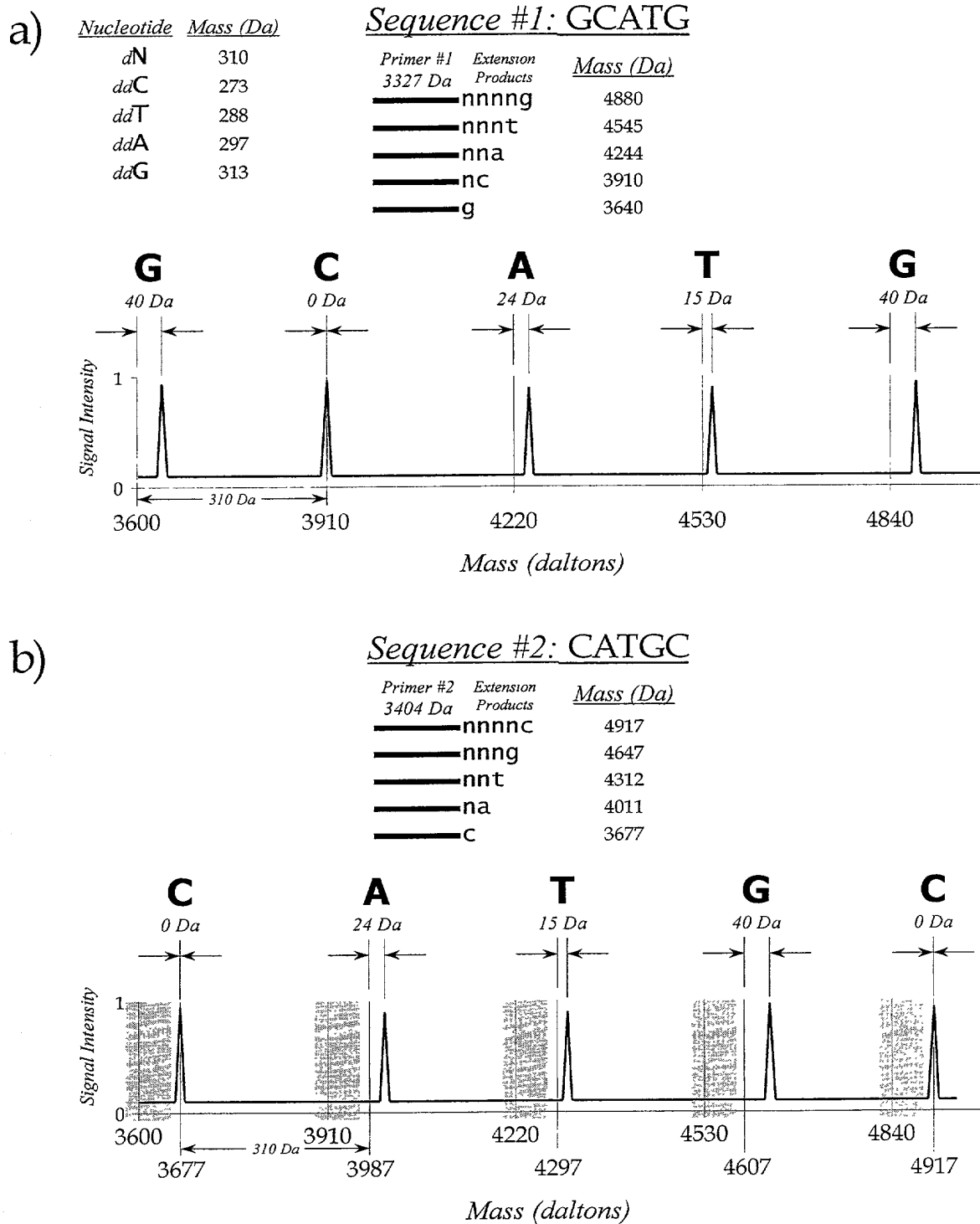


Figure 2

USE OF NUCLEOTIDE ANALOGS IN THE ANALYSIS OF
OLIGONUCLEOTIDE MIXTURES AND IN HIGHLY
MULTIPLEXED NUCLEIC ACID SEQUENCING

DOCKET NO. 25491-2408

Filed: June 13, 2001

Sequence #1: GCATA

Primer #1 3327 Da	Extension Products	Mass (Da)
————	nnnna	4864
————	nnnt	4545
————	nna	4244
————	nc	3910
————	g	3640

Sequence #3: CATGC

Primer #3 3404 Da	Extension Products	Mass (Da)
————	nnnnc	4917
————	nnng	4647
————	nnt	4312
————	na	4011
————	c	3677

Sequence #2: TCAGG

Primer #2 3481 Da	Extension Products	Mass (Da)
————	nnnng	5034
————	nnng	4724
————	nna	4398
————	nc	4064
————	t	3769

Sequence #4: AACTC

Primer #4 3558 Da	Extension Products	Mass (Da)
————	nnnnc	5071
————	nnnt	4776
————	nnc	4451
————	na	4165
————	a	3855

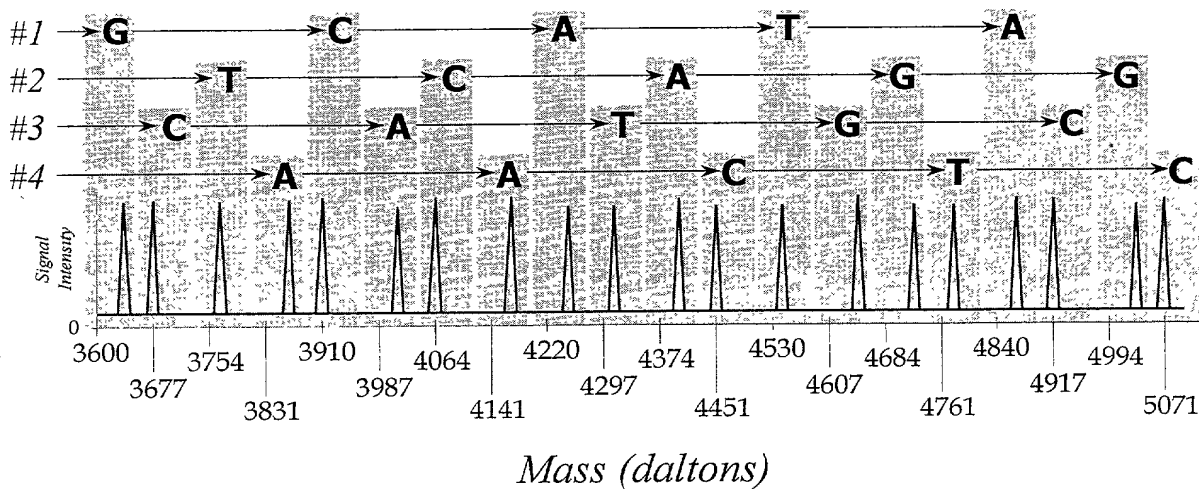
Sequence

Figure 3

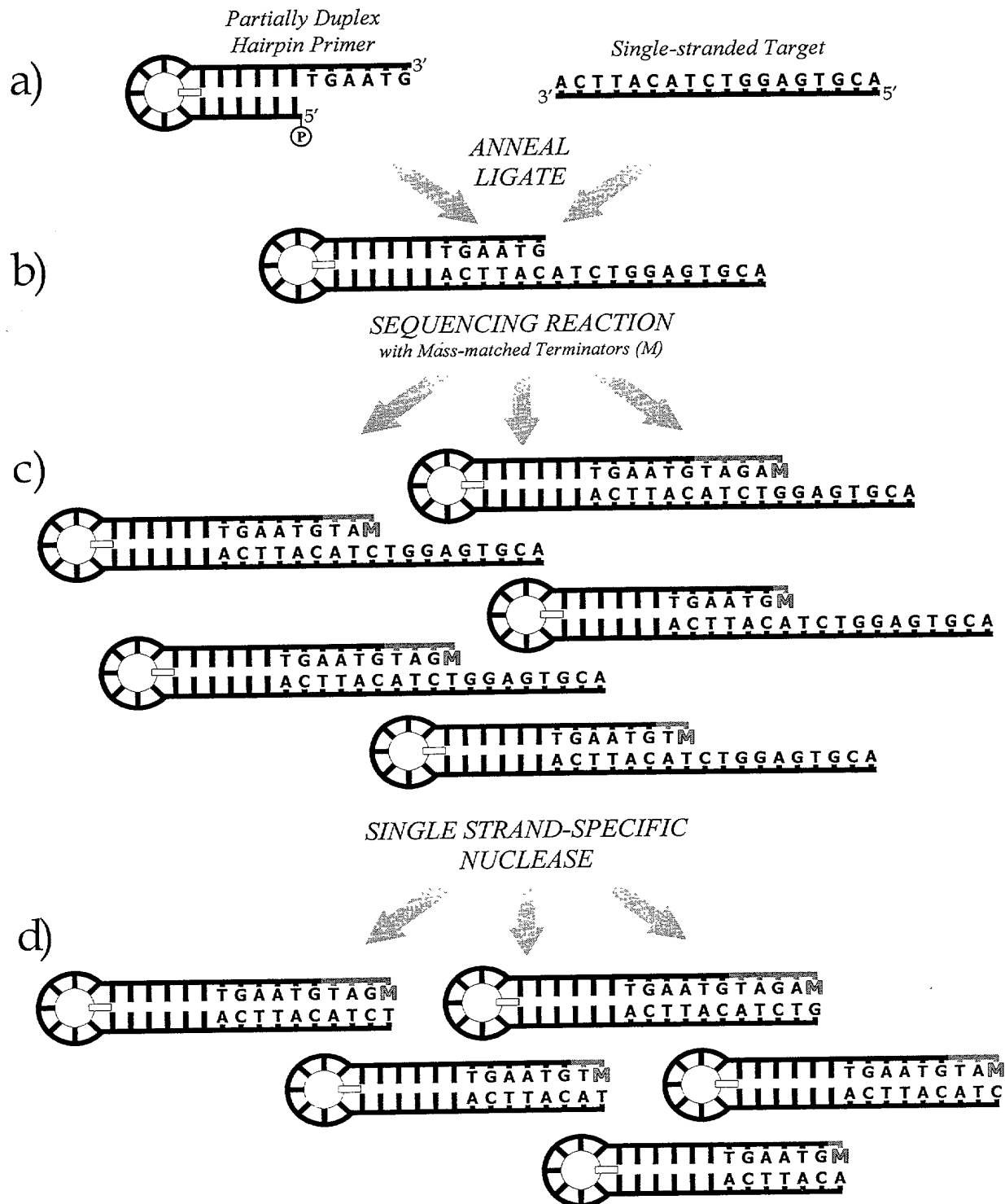







Figure 4

a)

<i>Reaction Products</i>	<i>Mass (Da)</i>
	12868.6
	12227.2
	11594.8
	10992.4
	10384.0

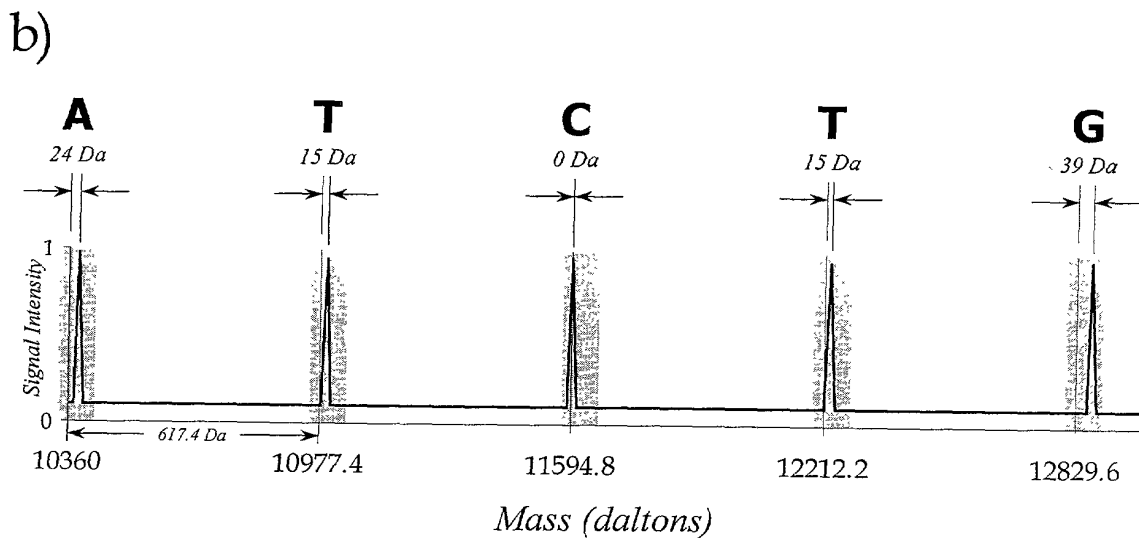


Figure 5

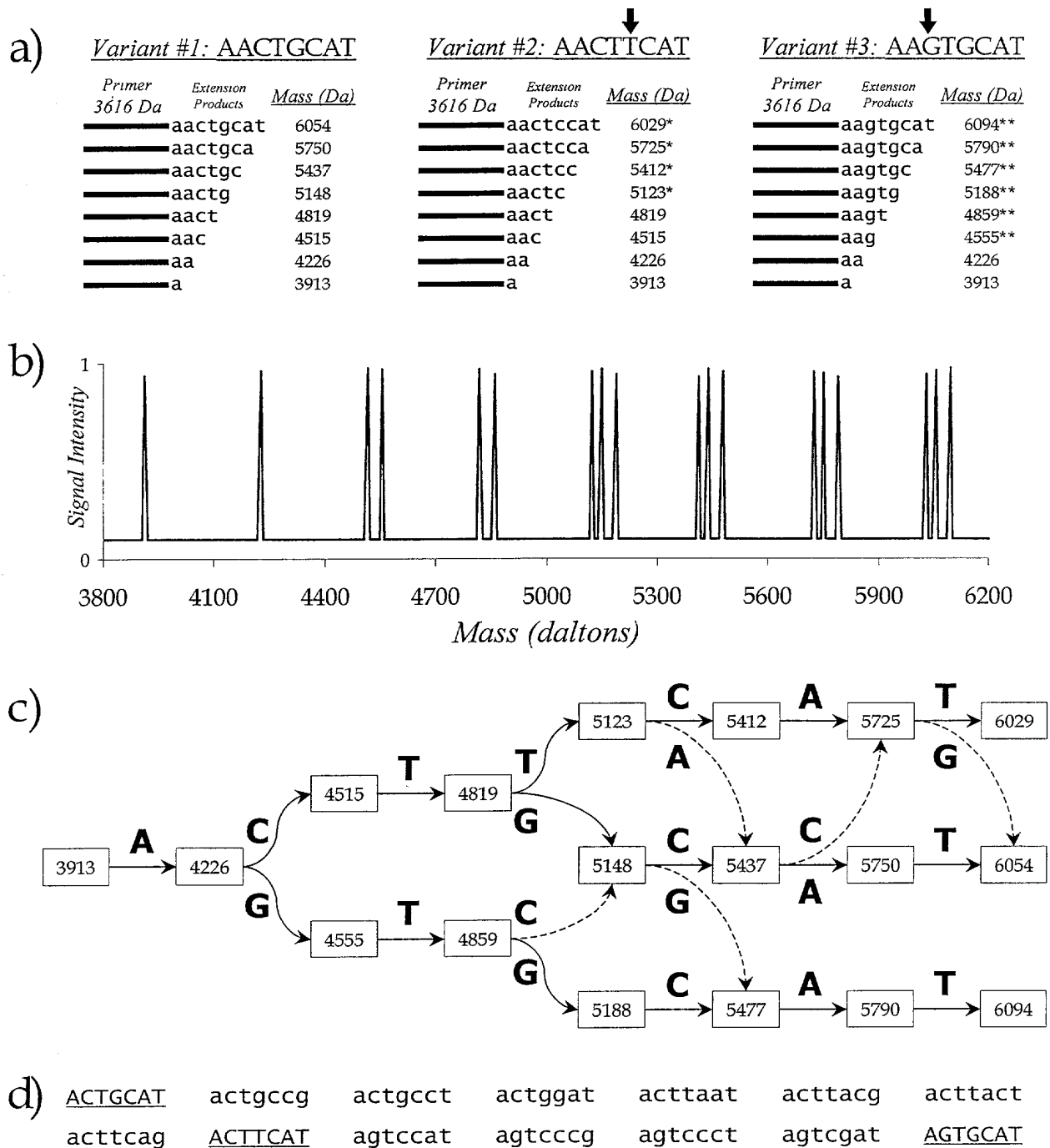
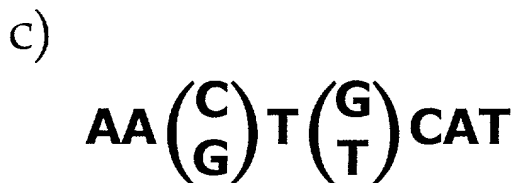
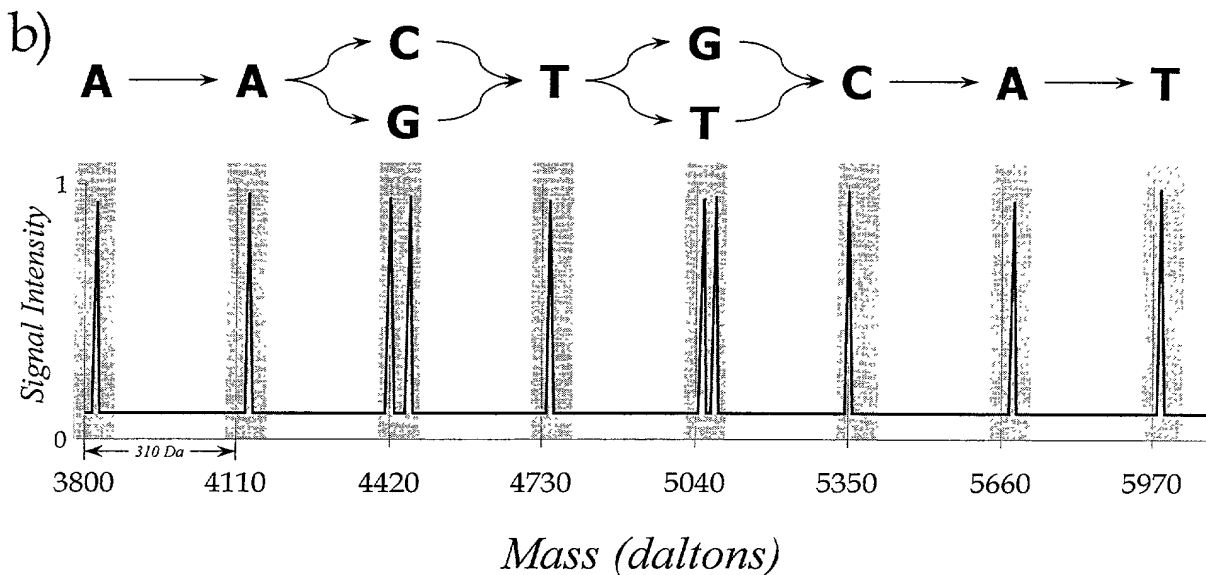


Figure 6

a)

<i>Variant #1: AACTGCAT</i>			<i>Variant #2: AACTTCAT</i>			<i>Variant #3: AAGTGCAT</i>		
<i>Primer</i>	<i>Extension</i>	<i>Mass (Da)</i>	<i>Primer</i>	<i>Extension</i>	<i>Mass (Da)</i>	<i>Primer</i>	<i>Extension</i>	<i>Mass (Da)</i>
<i>3527 Da</i>	<i>Products</i>		<i>3527 Da</i>	<i>Products</i>		<i>3527 Da</i>	<i>Products</i>	
nnnnnnnt	5985		nnnnnnnt	5985		nnnnnnnt	5985	
nnnnnna	5684		nnnnnna	5684		nnnnnna	5684	
nnnnnc	5350		nnnnnc	5350		nnnnnc	5350	
nnnng	5080		nnnnt	5055*		nnnng	5080	
nnnt	4745		nnnt	4745		nnnt	4745	
nnc	4420		nnc	4420		nng	4460**	
na	4134		na	4134		na	4134	
a	3824		a	3824		a	3824	



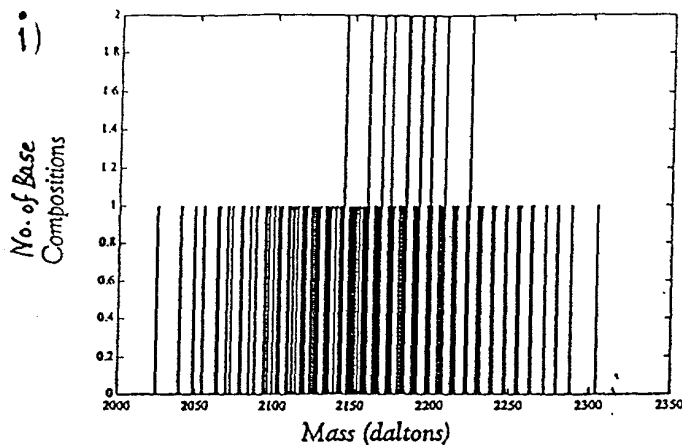
d)

AACTGCAT
 AACTTCAT
 AAGTGCAT
 aagttcat

Figure 7

Figure 8

Base composition density distributions for
7-mers using different nucleotide sets.



C = 289.2

T = 304.2

A = 313.2

G = 329.2

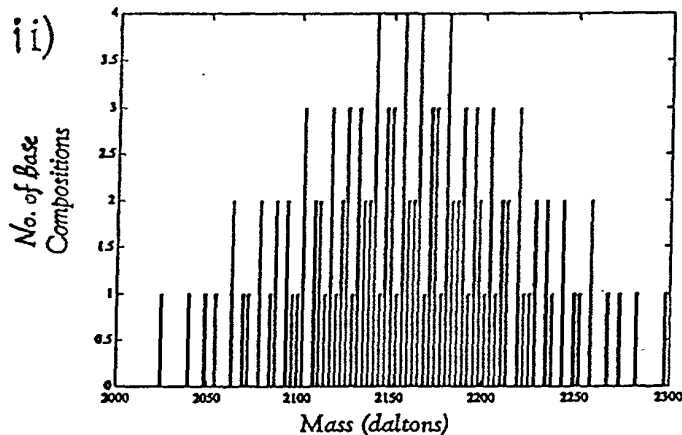
Naturally Occurring Bases

Peaks can be closer than one dalton.

Total No. of different base compositions = 120

Actual number of represented masses = 110

Avg. No. of compositions per mass value = 1.091



C = 289.2

T = 304.2

A = 313.2

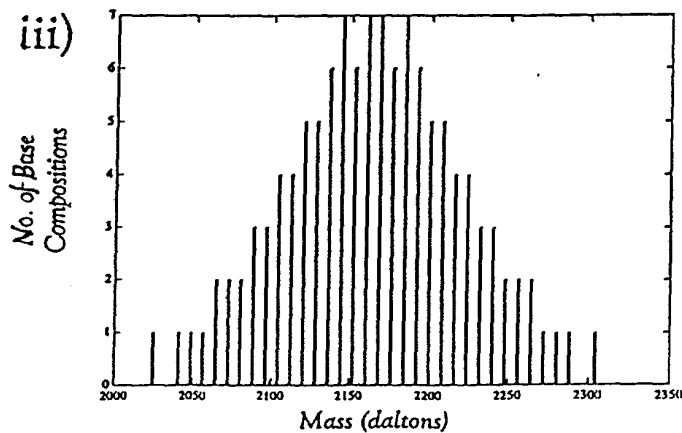
G = 328.2*Substitution with 7-deaza-dG*

Minimum peak separation = 3 daltons

Number of allowed mass values = 92

Actual number of represented masses = 64

Avg. No. of compositions per mass value = 1.875



C = 289.2

T = 305.2

A = 313.2

G = 329.2

Substitution with deuterio-dT

Minimum peak separation = 8 daltons

Number of allowed mass values = 36

Actual number of represented masses = 34

Avg. No. of compositions per mass value = 3.529